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Where Might the U.S. Army Budget Go, and How Might It Get There?

Carter C. Price, Aaron L. Martin, Edward Wu, Christopher G. Pernin

Prepared for the United States Army

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Preface

The U.S. Army has undergone considerable changes over the course of the past decade in response both to deliberate plans to modernize and adapt to a post-Cold War strategic environment and to major deployments abroad. With recent calls for increased spending efficiency or just in anticipation of forthcoming budget cuts, the Army is interested in what might be done to cut costs because capacity or capability decreases usually with large cuts in budgets. This document describes the historical case showing how the Army's budget might change as the deployments to Iraq and Afghanistan come to a close. Its findings should be of interest to those planning and budgeting for the force and to those interested in force development issues. The research presented in this report was completed before March 2011.

A companion report from this project deals with the efficiencies and budget implications of the Army's adoption of a rotational equipping strategy (Efficiencies from Applying a Rotational Equipping Strategy, Christopher G. Pernin, Edward Wu, Aaron Martin, Gregory Midgette, and Brendan See, Santa Monica, Calif.: MG-1092-A, 2011). Underlying that report, however, are preparations and concern for potentially large changes to the Army's budget that might occur once operations in Iraq and Afghanistan come to a close.

This research was sponsored by LTG Robert Lennox, Deputy Chief of Staff, G-8. It was conducted in RAND Arroyo Center's Force Development and Technology Program. RAND Arroyo Center, part of the RAND Corporation, is a federally funded research and development center sponsored by the United States Army.

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Summary

In a speech in early January 2011, Secretary of Defense Robert Gates acknowledged that there will be cuts in defense spending over the next decade.¹ He was explicit about some of these cuts, such as a reduction in the Army's end strength. Other proposals will continue to be floated as the calls for deficit reduction grow. This paper seeks to answer two questions about the future of the Army's budget: Where might the budget go? And what might the Army do? Our answers should provide decisionmakers in the Army with a historical context for the current budget environment and a set of possible paths to help adjust to future budget pressures.²

Where Might the Budget Go?

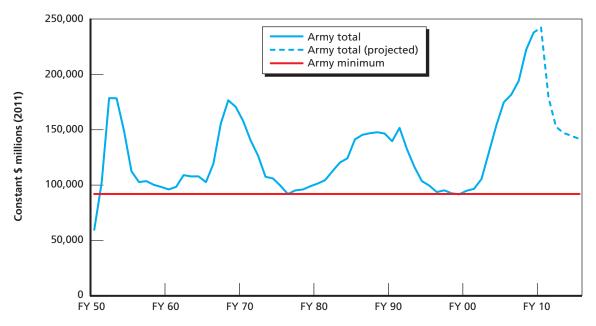
The future budget environment will pose difficult decisions for the Army. In concert with hot and cold wars and their associated growth in Army force structure and supplemental funding, the Army's budget has waxed and waned on a roughly 20-year cycle since 1950. As the U.S. presence in Iraq and Afghanistan diminishes over the next decade, the Army will likely enter the waning phase of the budget cycle. Historical trends in the Army's budget imply that toward the end of the 2010s, assuming an end of operations in Afghanistan by 2015 or so, the real budget may fall by as much as half from 2011 outlays, as seen in Figure S.1.

This cyclic trend is not an inherent budget process but a by-product of war and postwar spending demands. If there is a return to the historical minimum spending level, the relatively small efficiencies that the Secretary of Defense has recently called for (less than 5 percent of the budget) will pale in comparison to the budget cuts looming. Particularly, historical projections of 50-percent cuts in operations and maintenance (O&M) (from \$63 billion to \$30 billion), 40-percent cuts in personnel (from \$60 billion to \$35 billion), and 70-percent cuts in procurement (from \$38 billion to \$10 billion to \$15 billion) are possible. The percentage reductions are not the same for each account because the growth was not proportionally distributed. To reach those levels, the Army would face not just significant calls for efficiency but much more significant reductions in force structure.

¹ Robert Gates, "Statement on Department Budget and Efficiencies," speech, Department of Defense, January 6, 2011.

² The research presented in this report was completed before March 2011.

Figure S.1 Army Outlays from 1950 to 2010



SOURCE: U.S. Department of Defense, *National Defense Budget Estimates for FY 2011*, Washington, D.C., March 2010.

RAND OP331-S.1

What Might the Army Do?

Given the deep trough into which budgets might fall in the coming years, it is important for military policymakers to consider how the Army might be changed if the overall budget were cut, and it is important for the Army to be prepared to help the Department of Defense (DoD) understand the implications of different, broad options for cutting spending (see Table S.1). Each option will affect the force's capabilities and capacity, so it is important to begin analyzing the potential consequences of major changes sooner rather than later.

Table S.1 Four Broad Areas Where Budgets Might Be Reduced

	Area				
	Level and Cost of Support	Efficiency	Force Structure	Modernization	
Description	Reduce the amount spent on activities supporting the force	Identify areas where funding may be used more efficiently	Reduce the size of the force	Reduce ongoing efforts to modernize the force	
Specific action				System upgrades	
	Reduce benefits Reduce contracting	Reduce overhead Reduce logistic demand	Easier to regenerate forces	New weapons/ vehicles	
	support	Improve logistic efficiency	Overstructure areas		
		,	2 new Active Component Combat Aviation Brigades		
Budget	O&M Military personnel	O&M Procurement	Military personnel	Procurement	
account	willtary personner	rocurement	O&M		
			Procurement		
Size	Small to medium cuts	Small cuts	Small to large cuts	Small to medium cuts	
Impact	May reduce capacity	Does not reduce capacity or capability	Reduces capacity and capability	Reduces planned capability	

Acknowledgments

We appreciate the comments made by Joel Predd, and we thank LTC Robert Bradford, Eric Peltz, and Kathi Webb for their thoughtful reviews.

Introduction

From 2001 through 2009, the base defense budget grew by 22 percent and total defense spending grew by 69 percent (these are different growth rates because of supplemental spending); the Army budget grew more sharply, with total spending increasing by 146 percent.¹ Because of supplemental funding, the Army was able to conduct military operations in Iraq and Afghanistan, grow the overall size of its force, initiate major force transformation efforts, procure new equipment for operations, and modernize other equipment. It is common for the defense budget to experience large growth during military operations and to contract rapidly as operations come to a close. As U.S. forces continue to redeploy from Iraq, there are signs that the U.S. Congress may begin reducing the defense budget.²

In a 2010 memo, Secretary of Defense Robert Gates assigned annual goals to each branch of the military to cut spending on overhead and support functions.³ Over the five-year period between 2012 and 2016, the cumulative reduction in Department of Defense (DoD) spending is intended to be \$100 billion.⁴ The U.S. Army's share, about \$28 billion over that period, is less than 5 percent of its budget. The memo explicitly stated that across-the-board or percentage reductions are not to be used. The savings from administrative cuts can be redirected to "critical areas such as personnel in units, force structure, readiness to fight and investment in future capabilities." The idea behind these cuts is to reduce inessential overhead costs so that those funds can be redirected to other tasks (essentially, increasing the tooth-to-tail ratio).

Beyond the efficiency savings directed in the 2010 memo, Secretary of Defense Gates proposed specific cuts in his January 6, 2011, speech.⁶ These cuts total \$78 billion and include a reduction in Army force size of 27,000 soldiers and closing some bases in Europe. The National Commission on Fiscal Responsibility and Reform called for "deliberate, planned reductions

¹ Office of Management and Budget (OMB), Budget of the United States Government, Fiscal Year 2001, Washington, D.C.: Government Printing Office, p. 171; OMB, Budget of the United States Government, Fiscal Year 2009, Washington, D.C.: Government Printing Office, p. 49; and U.S. Department of Defense, National Defense Budget Estimates for FY 2011, Washington, D.C., March 2010.

 $^{^{2}}$ The research presented in this report was completed before March 2011.

³ Fact Sheet: Savings and Efficiencies Initiative, undated, p. 2.

⁴ Each military department (Air Force, Army, and Navy) has a goal of reducing administrative spending by \$2 billion in 2012, \$3 billion in 2013, \$5.3 billion in 2014, \$8 billion in 2015, and \$10 billion in 2016. On the same time line, the Defense Agency and Field Activity—wide goals are \$1 billion, \$2 billion, \$3 billion, \$4 billion, and \$7 billion. The cumulative savings over the five-year period are estimated at \$101.9 billion.

⁵ Fact Sheet: Savings and Efficiencies Initiative, p. 2.

⁶ Robert Gates, "Statement on Department Budget and Efficiencies," speech, Department of Defense, January 6, 2011.

in both domestic and defense spending."⁷ Given the calls for an environment of fiscal austerity in the federal government, the Army must be prepared to operate with a smaller budget in the near term. The questions remain: How big might the cuts be, and what options does the Army have to accomplish them?

To answer those questions, in the second chapter, we examine historical trends in the Army budget to gain context for the current budget and the possible scale of future cuts. We then describe specific proposals in the public domain for cuts and explore the possible implications for the Army in the third chapter.

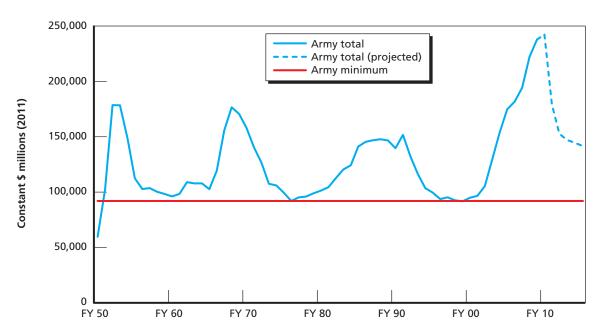
National Commission on Fiscal Responsibility and Reform, *The Moment of Truth*, Washington D.C., December 2010, p. 20.

Historical Analysis of Budgets

The disparate language used to discuss the future of the defense budget highlights the need for a historical context within which to consider the size of a postwar defense budget. We will look at empirical trends in real spending—more specifically, the minimum spending—for the Army's major accounts to determine a possible path for future budgets (2015–2020).¹ Our approach is meant to be descriptive; this contrasts with other studies that have been prescriptive, suggesting what the defense budget should be. Rather, we focus on demonstrating historical trends that have been rather consistent.

From 1950 until 2010, the Army budget has gone through ups and downs on roughly a 20-year cycle. Figure 2.1 shows the Army budget in constant 2011 dollars. There are four peaks in this time frame: the early 1950s for the Korean War, a little before 1970 for the Vietnam War, the middle to the end of the 1980s for the Cold War buildup during the Reagan administration, and the middle of the 2000s for the Global War on Terror (GWOT). For convenience,

Figure 2.1 Army Outlays from 1950 to 2010



SOURCE: U.S. Department of Defense, 2010. RAND OP331-2.1

All dollar figures will be inflated to 2011 dollars (or deflated in the case of projections of future spending).

we will use the term GWOT to describe the military actions taken in response to the terrorist attacks on September 11, 2001, including Operation Enduring Freedom and Operation Iraqi Freedom. With the exception of the Cold War buildup, the other three peaks occurred during active military operations. The peaks during the Korean and Vietnam Wars were roughly in the range of \$175 billion to \$180 billion, whereas peak Army funding during GWOT operations was higher, at about \$240 billion. Between each of the peaks in Army spending, there was a trough reaching a minimum of around \$90 billion to \$95 billion. If this trend continues, the Army budget will decline to as low as \$90 billion a little before 2020.

This downward trend is not inevitable and numerous events could counter it, including changes to current plans for force withdrawals in Iraq and Afghanistan or other national security policies. Nonetheless, broad trends following prior wars bear some similarities to current conditions and, thus, from a purely exploratory standpoint, the trend is useful in that it gives a historical context for the current budget and the size of cuts possible in the future.

The three largest components of the Army budget are the military personnel, operations and maintenance (O&M), and procurement accounts. On average, these three accounts make up more than 90 percent of the Army's spending. Because the level of spending in research, development, test, and evaluation (RDT&E), housing, and other accounts has been relatively stable and is relatively small (as a fraction of total spending, the other accounts have generally been 10 percent of the total Army budget), we will not focus on them here.

Big Cuts in Military Personnel Spending Require Big Cuts in Force Size

The military personnel account includes the pay and allowances for officers, enlisted, and cadets. It also includes travel costs for permanent change of station moves. Figure 2.2 shows spending in the military personnel account from 1950 to 2010, a trend line for the spending minimums, and the number of active duty personnel from 1960 to 2010.

The peaks in the military personnel account occur at roughly the same time as the peaks in the total Army budget. Although the total Army budget roughly doubles in size when comparing the peaks to the minimums, the military personnel account generally peaks at only 40–60 percent above the minimum. Unlike the peaks, the minimums in the military personnel account are generally reached a few years after the minimum in the overall Army budget. About half of the drop in spending tends to occur three to five years after the peak, but the minimum of each trough is not reached until seven to ten years after the peak. Empirically, it takes longer to reduce spending on personnel than it does to cut back on spending in other accounts. It is important to note that reducing the total size of the force by eliminating some units would also provide savings in O&M and, eventually, in procurement.

Military personnel spending and active duty size stayed in lock step from 1960 until 1982 as pay and benefits per servicemember stayed relatively constant. There was a spike in spending between 1982 and 1985 as a result of President Reagan's initiatives to increase military pay.² The spending increase was targeted at closing the military and civilian "pay gap."³ After the spike in the military personnel account, the force size and military personnel spending were

² Richard Halloran, "Reagan Bars Military Pay Cuts in the '88 Budget," New York Times, October 11, 1987.

³ Congressional Budget Office (CBO), Assessing Pay and Benefits for Military Personnel, August 15, 2007.

90,000 1,800 80,000 1,600 70,000 1,400 of personnel (thousands) Constant \$ millions (2011) 60,000 1,200 50,000 1,000 40,000 800 30,000 600 Military personnel 20,000 400 Military personnel (projected) Military personnel minimum Army personnel count 10,000 200 n **FY 60 FY 70** FY 80 FY 90 **FY 00 FY 10 FY 50**

Figure 2.2 Military Personnel Outlays from 1950 to 2010 and Active Duty Army Size from 1960 to 2010

SOURCE: U.S. Department of Defense, 2010. RAND OP331-2.2

roughly constant until around 1990. From 1990 to 2001, the force size dropped and flattened in concert with spending.

After 2001, while the Active Army force size grew 14 percent, military personnel spending increased much more dramatically—69 percent between 2000 and 2010 as a result of both structural pay changes and warfighting costs. A major factor causing military personnel spending to increase was a real increase in military pay and other benefits.⁴ To a great degree, the increase in base military pay was a result of the National Defense Authorization Act of 2000 in response to the growth in the military-civilian pay gap that developed following the end of the Cold War.⁵ It called for pay increases a half point above the Employment Cost Index from 2001 to 2006, with the pattern holding through 2010. Over this period, the basic allowance for housing increased dramatically as well. Thus, even with a return to the year 2000 force size, military personnel spending will not return to the year 2000 level at the end of military operations because of the real growth in military pay and other benefits during the 2000s. GWOT also increased personnel spending because deployed personnel receive special payments, such as hazard and separation pay, in addition to the bonuses used to maintain recruitment and retention in the face of heavy deployments. Furthermore, Army Reserve Component personnel

Andrew F. Krepinevich, Jr., National Security Strategy in an Era of Growing Challenges and Resource Constraints, Washington D.C.: Center for Strategic and Budgetary Assessments, June 2010, p. 8.

Beth Asch, James Hosek, Jeremy Arkes, Christine Fair, Jennifer Sharp, and Mark Totten, Military Recruiting and Retention After the Fiscal Year 2000 Military Pay Legislation, Santa Monica, Calif.: RAND Corporation MR-1532-OSD, 2002.

provided about 30 percent of the total deployed force during this period, and when reservists are activated and deployed, they must be paid accordingly.⁶

Another finding related to the military personnel account is the trend in the level of the minimums. Each minimum has been progressively lower than the one before. If this trend holds, later this decade the minimum spending on military personnel could be around \$35 billion (in 2011 dollars). The fiscal year (FY) 2011 base request is for \$60 billion, which would require a decrease in personnel spending of about 42 percent to meet the trend.

Ending operations in Iraq and Afghanistan could reduce military personnel spending to about \$54 billion. Secretary of Defense Gates's proposal to cut 27,000 soldiers might save another \$2 billion. To reach \$35 billion, another 180,000 active duty soldiers would need to be cut along with 30 percent in Army National Guard and Army Reserve force strength. If the Active (Regular) force drops to 480,000 soldiers, the Army's size in 2000, the military personnel cost would be around \$47 billion.

When looking at this analysis, it is important to emphasize the difference between average cost and marginal cost. There are fixed costs and overhead associated with any force structure regardless of the number of troops in the force. There are also incremental fixed costs associated with each division, brigade, etc. This makes the average cost per troop higher than the marginal cost per troop (the cost for one additional soldier) and may lead to overestimates of savings that could be gained by changing the force size. For example, in the case of a 10-percent reduction in force size, a 10-percent reduction in each brigade's strength would result in less saving than a cut of 10-percent in the number of brigades. This is because a cut in the number of brigades eliminates both the variable costs associated with the troops and the fixed costs associated with a brigade. Many of these fixed costs appear in other accounts, such as O&M.

The bottom line is that the military personnel account will not reach the levels implied by historical trends without significantly reducing the force size, and this is not likely to occur until 2014 or later.

Operations and Maintenance Spending Has a Consistent Minimum

After military personnel, the next largest account is operations and maintenance (though in FY 2009, O&M was the largest). O&M spending is related to the day-to-day costs of the Army. It includes funds for operating bases, fuel, contractors, spare parts, training, and recruiting. Administrative costs make up about one-quarter of the base O&M budget.⁸

The peaks and troughs in O&M occur at roughly the same time as the overall Army budget. The minimum is typically about \$31 billion and that has been relatively consistent, as can be seen in Figure 2.3. The maximum had been 70 to 100 percent higher than the minimum, but during GWOT it has been about 170 percent over the minimum. This much higher shift reflects GWOT spending on the wars in Iraq and Afghanistan. The large increase relative

⁶ Timothy M. Bonds, Dave Baiocchi, and Laurie L. McDonald, *Army Deployments to OIF and OEF*, Santa Monica, Calif.: RAND Corporation, DB-587-A, 2010, p. 7.

N. G. Mankiw, *Principles of Microeconomics*, Fort Worth, Tex.: Dryden Press, 2008, pp. 270–276.

⁸ Assistant Secretary of the Army for Financial Management and Comptroller, FY 2011 Presidential Budget Highlights, 2010.

120,000 O&M O&M (projected) 100,000 O&M minimum Constant \$ millions (2011) 80,000 60,000 40,000 20,000 FY 50 **FY 60** FY 70 **FY 80** FY 90 **FY 00** FY 10

Figure 2.3 Operations and Maintenance Accounts from 1950 to 2010

SOURCE: U.S. Department of Defense, 2010. RAND OP331-2.3

to previous spikes may be due to the increased use of contractors, which shifted some spending from military personnel into the O&M account, and the use of modern equipment, which costs more to operate and maintain than the equipment used during prior conflicts. Another factor may be the price of oil, which was substantially higher in the 2000s than in the 1990s.

Because the minimum spending in O&M has been fairly consistent at about \$31 billion in 2011 dollars, there is no empirical reason or trend implying that the O&M budget will not reach this level once the actions in Afghanistan and Iraq begin to draw down. The base request in 2011 for O&M was for \$63 billion. A reduction of about 50 percent in O&M would be required to meet the level suggested by the historical trend. The historical patterns in the O&M budget also indicate that this level could be reached very rapidly (within a year or two of the final drawdown). O&M spending tends to drop quickly back to its baseline of about \$31 billion once combat operations have terminated.

Procurement Spending Varies Greatly

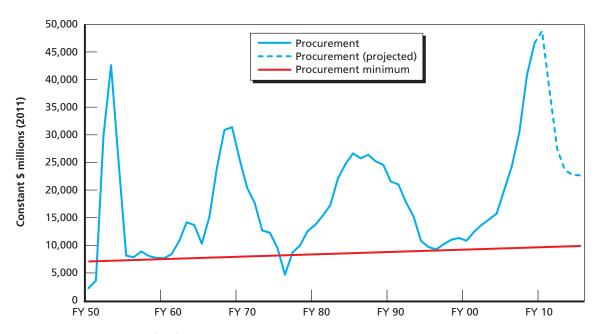
Procurement is the third large account in the Army's budget. Procurement accounts for the costs related to acquiring military equipment—the costs for both initial procurement and upgrades, including aircraft, missiles, vehicles, ammunition, weapons, and other equipment.

Historically, procurement has been a highly variable account. Its peaks and troughs are concurrent with those of the overall budget and in many ways drive the trends because of the relative size of the changes in the procurement budget. The maximum value has ranged from around four to six times larger than the minimum. Until the peak related to GWOT, the peaks had been getting progressively smaller, though the area around the peaks had been growing (so that with each progressive cycle, total real spending increased). With GWOT, the peak has been higher than in the Korean War and it remains to be seen if real spending will be as large as during the Cold War buildup.

Unlike military personnel or O&M, there is no obvious pattern to the floor in the procurement budget. The procurement account does reach its minimum at the same time as the overall budget. The minimum after the Cold War buildup was slightly higher than the one after the Korean War, but the minimum after the Vietnam War was very low (the 1976 spending dipped below \$5 billion in constant 2011 dollars). The relatively low levels in the mid-1970s may have been a product of a shrinking force and surplus stocks remaining from the Vietnam War buildup. If we use the post-Korean War low and the post-Cold War buildup low to extrapolate, the minimum in procurement would be between \$10 billion and \$15 billion later this decade. Figure 2.4 shows procurement spending and the trend line for the possible minimum.

The current base request for procurement is about \$37 billion. For procurement to meet the range discussed above, it would need to drop between 60 and 70 percent. Ending major operations in Iraq and Afghanistan will likely reduce procurement spending to \$20 billion to \$25 billion. This indicates that an additional \$10 billion will likely need to be found in the base procurement budget.





SOURCE: U.S. Department of Defense, 2010. RAND OP331-2.4

⁹ William A. Niskanen, "More Defense Spending for Smaller Forces: What Hath DOD Wrought," CATO Institute, Cato Policy Analysis No. 110, July 29, 1988.

If Historical Trends Prevail, the Army's Budget Will Decline Substantially **Across All Accounts**

This analysis illustrates what might happen to the Army's budget if historical trends prevail. The Army's FY 2011 budget (including base funding and supplemental funding provided to date) is \$180 billion and, given historical precedents, it might reach \$90 billion at some time in the 2015 to 2020 time frame depending on the drawdown in Afghanistan. Broken down into individual accounts, the trend implies that the military personnel account might go from \$60 billion to \$35 billion; O&M spending might be reduced from \$63 billion to \$30 billion; procurement costs could drop from \$38 billion to the \$10 billion to \$15 billion range; and all other accounts (RDT&E, military construction, etc.) could amount to roughly \$10 billion. These numbers amount to about a 50-percent cut in the budget by the end of the decade and would have substantially larger effects than current guidance on efficiency from the Secretary of Defense, which would amount to less than 5 percent of the budget.

There is also something to be said for the timing of the historical levels. For the most part, the peaks and valleys in each account are concurrent with the overall budget's peaks and valleys. The exceptions are the minimums in the military personnel account. These occur a few years after the overall minimums. Not surprisingly, it has taken longer in the past to shrink the force than to decrease O&M and procurement. Thus, it is doubtful that large spending cuts can be made in the military personnel account in the very near term, and immediate savings of any significance will need to be found elsewhere. However, by 2014 or 2015, cuts to the military personnel account could result in large savings if the force size decreases.

An Approach for Reducing Budgets

A sea of ink has been spilled providing approaches to reduce defense spending. Our study team reviewed suggestions from think tanks and government officials and found many common themes. In this chapter, we cluster the suggestions into four major areas where the Army can reduce the amount of resources needed or requested, providing brief discussion of the likely relative size of the cuts from these areas, and the possible effect of spending reductions on the Army's ability to operate. The sources we use are broadly representative of the literature and are used as exemplars for the sake of brevity.

The four major categories where the Army may seek to make budget cuts are these: reducing funding for operations and support (O&S) activities, improving the efficiency of Army processes, reducing certain elements in the Army's force structure, and curtailing modernization initiatives. We discuss some of the implications of these cuts on the Army's capacity and capabilities. Additional analysis on proposals in each of these areas is required to identify the actual size of cuts possible along with how they may affect the overall readiness of the Army.

Reduce the Level and Cost of Support

The Army may choose to make cuts by reducing the funding allocated to specific programs funded by its military personnel or O&M accounts. These accounts together make up the Army's O&S portion of the budget. These cuts would amount to reducing the level of support (e.g., cutting the level of services) or paying less for current activities (e.g., reducing military pay). Many cuts to O&S accounts will occur naturally as worldwide military operations wind down. War-related outlays in the O&S accounts provide special pays for deployed personnel, pay activated reservists, allow forces to deploy to and from theater, and enable forces to continue to operate while deployed. O&S accounts fund much of the annual costs of operations in Iraq and Afghanistan.

Several sources discuss changing the pay growth or benefits.¹ They discuss reducing the pay growth because it grew substantially over the last decade. Throughout DoD, the cost of benefits has grown faster than pay, primarily because of health care costs. The rising cost of health care is endemic in the United States and further study is required to determine what

¹ Some sources for these comments include a memorandum from Senator Tom A. Coburn (R-Oklahoma) to the National Commission on Fiscal Responsibility and Reform, May 18, 2010; Todd Harrison, "Evaluating Options for a Sustainable Defense," testimony before the U.S. House of Representatives, Committee on Oversight and Government, Subcommittee on National Security and Foreign Affairs on July 20, 2010; and Sustainable Defense Task Force, *Debts, Deficits, and Defense: A Way Forward*, 2010.

steps DoD can take to alter this. It is possible that the health reform legislation will alter this situation, but there is a dearth of study of the effects of these costs on the military. Although health care spending is a frequent topic in budget discussions, this spending is through DoD and will not substantially affect the Army's budget. DoD introduced a number of new family benefit programs during the past decade and has already reduced some education benefits for military spouses because of the potential soaring costs.² Reducing pay (or pay growth) or benefits could be done relatively quickly. It is important to note that any substantive cuts could discourage enlistment and reenlistment, particularly of the highest-quality soldiers. On the other hand, as the Army reduces overseas combat deployments, recruitment and retention may become less difficult, making some of the bonuses less important (particularly if unemployment remains high).3

Deep O&S cuts within the base budget may be more difficult to pursue. There is likely little desire to reduce the pay or social services provided to servicemembers. Focusing efforts on cutting O&S accounts may provide small- to medium-sized cuts to the Army budget. However, cutting O&S programs may also reduce the capacity of the Army should the cuts negatively influence recruiting and retention or limit the readiness of the Army's equipment.

Improve Efficiency of Army Processes

Another way the Army may seek to reduce its budget is through analyzing current practices to identify areas where resources are being used inefficiently. When faced with smaller budgets, the Army may determine that it can reduce overhead through eliminating redundant headquarters organizations. Additionally, the identification of unnecessarily redundant capabilities may provide other opportunities for budget cuts. Last, the Army may examine recent changes in the way it manages organizations that allow it to reduce equipment or logistics requirements. Finding ways to more efficiently manage programs would likely lead to reductions in the Army's O&M or procurement budgets.

Secretary of Defense Robert Gates has frequently spoken of reducing the number of generals and overall bureaucracy.4 He recently announced cuts including annual cuts of 10 percent of the support staff contractors used in each of the next three years, elimination of Joint Forces Command, and elimination of the Business Transformation Agency. These cuts fall into the pattern of deep cuts to the military bureaucracy but not to the generating force.

Increasing the efficiency of the Army would likely result in immediate savings (though there may also be some immediate costs for implementing an efficiency program), but the savings are likely to be permanent. The Army may identify efficiencies in areas where some practices have been changed but others have not. For example, in the past five years, the Army moved units to a rotational readiness cycle, staggering units' deployment readiness. However, it continues to equip those units according to practices begun during the Cold War, when each unit always has its full stock of equipment. There are potential efficiency gains from updating

Karen Jowers, "DOD Officials Explain New Spouse Tuition Rules," Army Times, July 22, 2010.

³ Krepinevitch, 2010, p. 8.

^{4 &}quot;Sec. Gates Announces Efficiencies Initiatives," U.S. Department of Defense, Office of the Assistant Secretary of Defense (Public Affairs), News Release No. 706-10, August 9, 2010.

the Army's equipping practices by tailoring the stock of equipment units have to various levels of readiness.

Improving the efficiency of Army processes is a very desirable way to reduce the Army budget, since it likely would create savings immediately, and these savings may persist over multiple annual budgets. Additionally, these improvements would not reduce the capability or capacity of the Army. However, finding new ways to improve the efficiency of Army processes is not likely to result in large cuts in the overall Army budget. O'Hanlon notes that "competition, outsourcing, and use of best business practices can produce savings but generally in the range of hundreds of millions of dollars, not more." Overall, these are cuts that Army planners should continuously seek out, but they will not be sufficient if the Army needs to make major reductions in its budget.

Reduce Elements of the Army's Force Structure

Another way to reduce the budget is for the overall size of the force to contract. When reducing the size of the force, the Army may choose to make general cuts across the board, or it may choose to focus its cuts based on some criteria. For example, the Army may choose to cut parts of the force that are easier to regenerate should it face a crisis, its analysis of various future scenarios may indicate that some parts of the force are overstructured and may be reduced without considerably increasing operational risks, or it may choose to cut some of its most expensive organizations. Alternatively, the Army may choose now to reduce parts of the force that it is currently developing or planning to develop in the near future. The Quadrennial Defense Review directed the Army to generate two additional combat aviation brigades; the Army may eliminate these planned portions of the force, allowing it to reduce expected budgets in future years.6

The Sustainable Defense Task Force (2010) report and others suggest changes to the force structure and size. Specifically, there are calls to reduce the force size as the United States reduces its activities in Iraq and Afghanistan. These suggestions are generally justified by the fact that the force was expanded to deal with the current conflicts and can return to the smaller pre-GWOT size afterward. Benjamin Friedman and Christopher Preble from Cato suggested a dramatically smaller Army of 350,000 troops (this number is in line with the lowest estimates discussed in the historical trends).7

Reducing the force structure provides the opportunity for the Army to make cuts in the military personnel, O&M, and procurement accounts. It also provides opportunities to make large reductions in the Army budget, depending on the types of units trimmed and the overall personnel levels needed to operate in the organizations remaining in the Army. The strong relationship between military personnel spending and force size indicates that large cuts in the personnel count would be required to achieve substantial cuts in the budget. Should the Army face budget reductions that are similar in scope to those in the past, it will need to reduce some parts of the force.

⁵ Michael E. O'Hanlon, Budgeting for Hard Power: Defense and Security Spending Under Barack Obama, Washington D.C.: Brookings Intuition Press, 2009, p. 37.

⁶ U.S. Department of Defense, *Quadrennial Defense Review Report*, Washington, D.C., February 2010.

This work was published in an appendix to the Sustainable Defense Task Force, 2010, pp. 29–34.

Changing the force mix may not reduce personnel or O&M costs substantially, especially if the total force size remains the same, because personnel costs are driven by personnel numbers. The 1997 CBO study found that a 12-percent reduction in O&M spending would require that the Army drop its force size by 23 percent.8 It was beyond the scope of this work to determine the effect of a different force mix on procurement. Medium and light forces use less-expensive equipment. That said, changes in procurement would deliver savings only in the periodic modernization phases, whereas savings in O&M and military personnel spending would be accrued annually.

Many sources have suggested, in conjunction with decreasing force size, reducing the number of troops based in Europe or Asia and eliminating them from the force because they are no longer needed for deterrence.9 Any such cuts may result in some immediate reductions in O&M costs related to remediation, but O&M and military personnel savings would be permanent and potentially large. Closing the bases involves strategic considerations beyond the immediate desire to achieve reductions in spending.

Force structure cuts require careful analysis, since they reduce both the capacity and capabilities of the Army. Therefore, the types of cuts made must be deliberate and must focus on areas where Army and national leaders are willing to accept additional risk relative to its current or planned force structure. If force size is reduced, it should be done in a way that leaves the force mix (e.g., number of heavy, medium, and light forces) that is best for a diverse set of future operations.

Reduce Ongoing Modernization Programs

The Army may choose to make major budget cuts by reducing the procurement of new equipment and modernize existing equipment. Reducing ongoing modernization programs would focus on reducing the amount of funding allocated to procurement. We saw above that the procurement account is highly variable during budget cycles, indicating that efforts to reduce the overall Army budget in the past may have focused on these types of cuts.

Curtailing some modernization programs may provide opportunities to reduce the Army budget by a moderate amount. Additionally, these cuts may allow the Army to maintain its overall capacity while reducing planned improvements in capabilities.

In most of the editorials¹⁰ and reports¹¹ about approaches to cutting the DoD budget, procurement takes center stage. Specifically, Air Force acquisition plans for F-22s and F-35s and the Navy's DDG 1000, Littoral Combat Ship, and aircraft carriers are often mentioned in talks of procurement reform.¹² The Army is not mentioned as frequently because the scale of

⁸ Congressional Budget Office, Paying for Military Readiness and Upkeep: Trends in O&M Spending, 1997, p. 48.

⁹ This is widely recommended; see O'Hanlon, 2009, pp. 90–95; and Sustainable Defense Task Force, 2010, pp. 16–18.

¹⁰ For example, Veronique de Rugy, "Cutting the Pentagon Budget," July 2010.

¹¹ For example, Sustainable Defense Task Force, 2010, pp. 22–24.

¹² Some of these programs were mentioned by Secretary of Defense Gates in a speech at the Eisenhower Library in Abilene, Kan., on May 8, 2010. Eisenhower Library (Defense Spending), Remarks as Delivered by Secretary of Defense Robert M. Gates, Abilene, Kan., May 8, 2010, speech, U.S. Department of Defense, Office of the Assistant Secretary of Defense (Public Affairs).

savings from cutting Army procurement is much lower now that the Future Combat Systems (FCS) program has been eliminated, a program that had been the major modernization effort for many years.

Cutting an acquisition program may offer large immediate savings (\$10 billion to \$30 billion over five years) but will result in older vehicle fleets and could entail forgoing key capabilities and capacity that the Army needs. Additionally, cutting a major acquisition program is likely to result in only a one-time saving, and it may result in higher O&M and procurement costs in the later years, because older equipment needs to be sustained and new sets must eventually be procured.

Cutting modernization programs may seem an easy way to cut the budget, because entire programs are removed from the budget. However, this is not necessarily the best approach, because any such cut is largely a one-time reduction and generally only postpones the eventual modernization effort.

Table 3.1 summarizes the effect of various budget-reduction strategies.

Table 3.1 Four Broad Areas Where Budgets Might Be Reduced

		Area				
	Level and Cost of Support	Efficiency	Force Structure	Modernization		
Description	Reduce the amount spent on activities supporting the force	Identify areas where funding may be used more efficiently	Reduce the size of the force	Reduce ongoing efforts to modernize the force		
Specific action	Cut military pay	Use rotational equipping	General cut across the	System upgrades		
action	Reduce benefits	Reduce overhead		New weapons/		
		Easier to regenerate forces	vehicles			
	зарроге	Improve logistic efficiency	Overstructure areas			
			2 new Active Component Combat Aviation Brigades			
Budget	O&M	O&M	Military personnel	Procurement		
account	Military personnel	Procurement	O&M			
			Procurement			
Size	Small to medium cuts	Small cuts	Small to large cuts	Small to medium cuts		
Impact	May reduce capacity	Does not reduce capacity or capability	Reduces capacity and capability	Reduces planned capability		

Conclusion

The Army's budget rises and falls at regular intervals. These cycles generally last about 20 years with peaks coinciding with military operations or major buildups. The Army's deployments to Iraq, Afghanistan, and elsewhere during the past ten years constitute yet another peak, and if DoD senior leaders' intents are fulfilled, those major deployments too will be ending in the coming few years.

With the drawdown in Iraq and plans for drawdown in Afghanistan, the Army's budget will likely fall in similar ways to its fall following past buildups. If the future follows historical trends, in the next ten years the Army's budget could fall in real dollars by as much as half from 2011 outlays.

Historically, major cuts to the DoD budget have been shared across the major accounts. Our calculations show that reductions in procurement (by 70 percent), O&M (by 50 percent) and personnel (by 40 percent) would far outpace any near-term efficiencies being considered currently in the Army. The Army should therefore start early deliberations on potential paths forward should major adjustments to budgets be necessary.

The Army, therefore, may have tough budget choices ahead. To reach such low budget levels, it would need to consider combinations of cuts in O&S, improvements in efficiency, reductions in force size, and reductions in modernization programs. The literature is rife with examples of each, with proponents and detractors on each side. A review of a representative set of those potential approaches in Chapter Three found some important conclusions regarding how the Army might consider these types of changes.

Quick O&S cuts (to pay or benefits) may provide budget relief but should be pursued only after due deliberations on how those cuts will affect recruiting, retention, and the overall health of the Army as an institution. These cuts provide only small to medium effects and will therefore have to be accompanied by quite a few other changes.

Improving efficiencies (which is already occurring as near-term budget pressure mounts) is absolutely necessary in the face of permanent changes to the budget; as an added benefit, this step would affect the capacity and capability of the Army less than other changes the Army might adopt. Small efficiencies can be easy to sell because the stakes are lower, but more profound changes to the way the Army operates will be more difficult. Changing the way the Army equips and modernizes its force coinciding with new operating strategies such as Army Force Generation is a tougher sell but still offers opportunities for major gains in efficiency.

Both reducing O&S and increasing operating efficiencies can provide small- to mediumsize budget reductions and can often be done in a way that does not reduce the capacity or capability of the Army's overall force. To achieve larger changes to the budget, similar to those implied by the historical analysis in this report, the Army would have to consider how best to sacrifice capacity and capability through reducing force structure and scaling back modernization plans.

Force structure and modernization reductions can be done in many ways, and the Army should proactively consider how best to reduce each, what risks each reduction entails, and how reconstituting would occur if the necessity were to arise. Each of these will affect the force's capabilities and capacity, so planning for the consequences of potentially deep budget cuts should begin sooner rather than later.

Bibliography

Asch, Beth, James Hosek, Jeremy Arkes, Christine Fair, Jennifer Sharp, and Mark Totten, *Military Recruiting and Retention After the Fiscal Year 2000 Military Pay Legislation*, Santa Monica, Calif.: RAND Corporation, MR-1532-OSD, 2002. As of February 10, 2011:

http://www.rand.org/pubs/monograph_reports/MR1532.html

Assistant Secretary of the Army for Financial Management and Comptroller, FY 2011 Presidential Budget Highlights, 2010. As of October 14, 2010:

http://asafm.army.mil/Documents/OfficeDocuments/Budget/BudgetMaterials/FY11//pbhl.pdf

Bonds, Timothy M., Dave Baiocchi, and Laurie L. McDonald, *Army Deployments to OIF and OEF*, Santa Monica, Calif.: RAND Corporation, DB-587-A, 2010. As of October 14, 2010: http://www.rand.org/pubs/documented_briefings/DB587.html

CBO—See Congressional Budget Office.

Coburn, Senator Tom A. (R-Oklahoma), memorandum to the National Commission on Fiscal Responsibility and Reform, May 18, 2010. As of October 14, 2010:

http://coburn.senate.gov/public/index.cfm?a=Files.Serve&File_id=3ae23727-6bbe-4ce1-8516-2b82726911cc

Congressional Budget Office, Paying for Military Readiness and Upkeep: Trends in O&M Spending, 1997. As of October 14, 2010:

http://www.cbo.gov/ftpdocs/0xx/doc58/milready.pdf

_____, Assessing Pay and Benefits for Military Personnel, August 15, 2007. As of February 7, 2011: http://www.cbo.gov/ftpdocs/85xx/doc8550/08-15-MilitaryCompensation_Brief.pdf

de Rugy, Veronique, "Cutting the Pentagon Budget," reason.com, July 2010. As of October 14, 2010: http://reason.com/archives/2010/06/11/cutting-the-pentagon-budget/print

Eaglen, Mackenzie, "U.S. Defense Spending: The Mismatch Between Plans and Resources," The Heritage Foundation, Backgrounder No. 2418, July 7, 2010. As of October 14, 2010:

http://www.heritage.org/Research/Reports/2010/06/US-Defense-Spending-The-Mismatch-Between-Plans-and-Resources

Eisenhower Library (Defense Spending), Remarks as Delivered by Secretary of Defense Robert M. Gates, Abilene, Kan., May 8, 2010, speech, U.S. Department of Defense, Office of the Assistant Secretary of Defense (Public Affairs). As of October 14, 2010:

http://www.defense.gov/Speeches/Speech.aspx?SpeechID=1467

Fact Sheet: Savings and Efficiencies Initiative, undated. As of October 14, 2010: http://www.defense.gov/news/savings.pdf

Feickert, Andres, *U.S. Army's Modular Redesign: Issues for Congress*, Washington, D.C.: Congressional Research Service, CRS Report RL32476, Updated May 5, 2006.

Gates, Robert, "Statement on Department Budget and Efficiencies," speech, Department of Defense, January 6, 2011. As of March 7, 2011:

http://www.defense.gov/speeches/speech.aspx?speechid=1527

Halloran, Richard, "Reagan Bars Military Pay Cuts in the '88 Budget," New York Times, October 11, 1987. As of October 14, 2010:

http://www.nytimes.com/1987/10/11/us/reagan-bars-military-pay-cuts-in-the-88-budget.html

Harrison, Todd, "Evaluating Options for a Sustainable Defense," testimony before the U.S. House of Representatives, Committee on Oversight and Government, Subcommittee on National Security and Foreign Affairs on July 20, 2010. As of October 14, 2010:

http://www.csbaonline.org/4Publications/PubLibrary/T.20100720.Evaluating_Options/T.20100720. Evaluating_Options.pdf

Jowers, Karen, "DOD Officials Explain New Spouse Tuition Rules," Army Times, July 22, 2010. As of January

http://www.armytimes.com/news/2010/07/military_mycaa_spousetuition_072010w/

Krepinevich, Andrew F., Jr., National Security Strategy in an Era of Growing Challenges and Resource Constraints, Washington D.C.: Center for Strategic and Budgetary Assessments, June 2010. As of October 14, 2010:

http://www.csbaonline.org/4Publications/PubLibrary/B.20100615.National_Security_/B.20100615.National_ Security_.pdf

Mankiw, N. G., Principles of Microeconomics, Fort Worth, Tex.: Dryden Press, 2008.

National Commission on Fiscal Responsibility and Reform, The Moment of Truth, Washington D.C., December 2010.

Niskanen, William A., "More Defense Spending for Smaller Forces: What Hath DOD Wrought," CATO Institute, Cato Policy Analysis No. 110, July 29, 1988. As of October 14, 2010: http://www.cato.org/pubs/pas/pa110.html

Office of Management and Budget (OMB), Budget of the United States Government, Fiscal Year 2001, Washington, D.C.: Government Printing Office. As of September 20, 2010: http://www.gpoaccess.gov/usbudget/fy01/pdf/budget.pdf

, Budget of the United States Government, Fiscal Year 2009, Washington, D.C.: Government Printing Office. As of September 20, 2010:

http://www.gpoaccess.gov/usbudget/fy09/pdf/budget/defense.pdf

O'Hanlon, Michael E., Budgeting for Hard Power: Defense and Security Spending Under Barack Obama, Washington, D.C.: Brookings Institution Press, 2009.

OMB—See Office of Management and Budget.

Pernin, Christopher G., Edward Wu, Aaron Martin, Gregory Midgette, and Brendan See, Efficiencies from Applying a Rotational Equipping Strategy, Santa Monica, Calif.: MG-1092-A, 2011. As of April 5, 2011: http://www.rand.org/monographs/MG1092.html

"Sec. Gates Announces Efficiencies Initiatives," U.S. Department of Defense, Office of the Assistant Secretary of Defense (Public Affairs), News Release No. 706-10, August 9, 2010. As of October 14, 2010: http://www.defense.gov/releases/release.aspx?releaseid=13782

Sustainable Defense Task Force, Debts, Deficits, and Defense: A Way Forward, 2010. As of October 14, 2010: http://www.comw.org/pda/fulltext/1006SDTFreport.pdf

Tebbs, Jeffrey M., "Pruning the Defense Budget," The Brookings Institution, 2007, pp. 13–19. As of October 14, 2010:

http://www.brookings.edu/views/papers/200701tebbs.pdf

U.S. Department of Defense, Quadrennial Defense Review Report, Washington, D.C., February 2010.

, National Defense Budget Estimates for FY 2011, Washington, D.C., March 2010. As of September 20, 2010:

http://comptroller.defense.gov/defbudget/fy2011/FY11_Green_Book.pdf

Williams, Cindy, ed., Holding the Line: U.S. Defense Alternatives for the Early 21st Century, Boston, Mass.: MIT Press, 2001.